

WHAT IS CLAIMED IS:

1. A lightguide comprising:

a prism sheet having a plane surface and a surface with a plurality of patterned microlens;

5 a transparent wedge having a cross-section of trapezoid; and
a binder layer sandwiched between said plane surface of said prism sheet and said transparent wedge,

wherein said binder and said prism sheet are made from substantially identical or different materials.

10 2. The lightguide as claimed in claim 1, further comprising a patterned diffuser sheet, wherein the pattern of said diffuser sheet is complementary to the pattern of said prism sheet.

3. The lightguide as claimed in claim 2, wherein the other surface contrary to said patterned surface of said diffuser sheet
15 is a plane surface.

4. The lightguide as claimed in claim 2, wherein the two contrary surfaces of said diffuser sheet have substantially identical patterns.

5. The lightguide as claimed in claim 1, wherein said transparent
20 wedge is made from polycarbonate or polymethacrylate.

6. The lightguide as claimed in claim 1, wherein said lightguide applied for a liquid crystal display device.

7. A laminated film for manufacturing a lightguide, comprising:
a carrier sheet;

25 a prism sheet having a plane surface and a patterned surface

with a plurality of microlens;

a protection sheet sandwiched between said carrier sheet and said patterned surface of said prism sheet, wherein said protection sheet has a patterned surface to contact with said prism sheet, and the pattern of said patterned surface of said protection layer is complementary to the pattern of said prism; and

a binder layer attached on said plane surface of said prism sheet;

wherein said binder and said prism sheet are made from substantially identical or different materials.

8. The laminated film as claimed in claim 7, wherein said protection sheet is integrated with said carrier sheet.

9. The laminated film as claimed in claim 7, further comprising a release layer, wherein said release layer is sandwiched by said protection sheet and said prism sheet.

10. A laminated film for manufacturing a lightguide, comprising:
a carrier sheet;

a prism sheet having a plane surface and a patterned surface with a plurality of microlens;

a diffuser sheet sandwiched between said carrier sheet and said patterned surface of said prism sheet, wherein said diffuser sheet has a patterned surface to contact with said prism sheet, and the pattern of said patterned surface of said diffuser layer is complementary to the pattern of said prism;

a protection sheet for protecting said prism sheet or said diffuser sheet, wherein said protection sheet is sandwiched between said carrier sheet and said diffuser sheet; and

5 a binder layer attached on said plane surface of said prism sheet;

wherein said binder and said prism sheet are made from substantially identical or different materials.

11. The laminated film as claimed in claim 10, wherein said protection sheet is integrated with said carrier sheet

10 12. The laminated film as claimed in claim 10, further comprising a release layer, wherein said release layer is sandwiched by said protection sheet and said prism sheet.

13. A method for manufacturing a lightguide, comprising following steps:

15 (A) providing a mold having a laminated film inside, said laminated film comprising:

a carrier sheet;

a prism sheet having a plane surface and a patterned surface with a plurality of microlens;

20 a protection sheet sandwiched between said carrier sheet and said patterned surface of said prism sheet,

wherein said protection sheet has a patterned surface to contact with said prism sheet, and the pattern of

25 said patterned surface of said protection layer is complementary to the pattern of said prism; and

a binder layer attached on said plane surface of said prism sheet;

(B) injecting a polymer into said mold with said laminated film;

5 (C) opening said mold and taking out the molding; and

(D) releasing said carrier sheet and said protection sheet from said molding.

14. The method as claimed in claim 13, wherein said protection sheet is integrated with said carrier sheet.

10 15. The method as claimed in claim 13, wherein said laminated film is provided or supplied continuously.

16. The method as claimed in claim 13, wherein said laminated film further comprising a release layer sandwiched by said protection sheet and said prism sheet.

15 17. A method for manufacturing a lightguide, comprising following steps:

(A) providing a mold having a laminated film inside, said laminated film comprising:

a carrier sheet;

20 a prism sheet having a plane surface and a patterned surface with a plurality of microlens;

a diffuser sheet sandwiched between said carrier sheet and said patterned surface of said prism sheet,

25 wherein said diffuser sheet has a patterned surface to contact with said prism sheet, and the pattern of said

patterned surface of said diffuser layer is complementary to the pattern of said prism;
a protection sheet for protecting said prism sheet or said diffuser sheet, wherein said protection sheet is sandwiched between said carrier sheet and said diffuser sheet; and
a binder layer attached on said plane surface of said prism sheet;
wherein said binder and said prism sheet are made from substantially identical or different materials;

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(B) injecting a polymer into said mold with said laminated film;

(C) opening said mold and taking out the molding; and

(D) releasing said carrier sheet and said protection sheet from said molding.

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18. The method as claimed in claim 17, wherein said protection sheet is integrated with said carrier sheet.

19. The method as claimed in claim 17, wherein said laminated film is provided or supplied continuously.

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20. The method as claimed in claim 17, wherein said laminated film further comprising a release layer sandwiched by said protection sheet and said prism sheet. .

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